DEC STD 060-0
DESIGN OF HARDWARE PRODUCTS TO NATIONAL AND INTERNATIONAL REGULATIONS AND STANDARDS, POLICIES AND PROCEDURES

DOCUMENT IDENTIFIER: A-DS-EL00060-00-0 Rev L1, 10-Aug-1989

ABSTRACT: This standard defines the responsibilities and requirements for designing and certifying Digital's hardware products to meet the requirements of nationally and internationally recognized organizations.

APPLICABILITY: Mandatory for all Digital's hardware products.

STATUS: Approved 10-Aug-1989; see $VTX SMC for expiration date.

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REVISION HISTORY:	Rev K,	03-Apr-1986	ECO Number LJO08
	Rev K1,	10-Mar-1987	ECO Number LJO09
	Rev L,	29-Feb-1988	ECO Number CTO10
	Rev L1,	10-Aug-1989	ECO Number CTS11

Document Management Category:	Country Requirements (HRI)
Responsible Department:	Corporate Product Safety and Regulations (CPS/R)
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APPROVAL: This standard has been reviewed and recommended for approval by the General Review Group for its category and is approved for use throughout Digital.

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1 INTRODUCTION

In a memo dated 25-Jul-1984, Jack Smith, Vice President of Engineering, stated that every engineering project must address all relevant design issues to meet the standards required in the 21 strategic countries.

This country list is subject to change. For the latest list, contact the International Products Office. This list is available in *DEC STD 066-3 Policy for Designing Products for All Countries Designated as Strategic Markets.*

Digital's policy is to be a good citizen of every country where we do business and to comply fully with local laws in those countries. At the hardware design level, Digital hardware products will, as a minimum, comply with the health, safety, environmental, labeling, acoustical, ergonomic, language, and telecommunication regulations in countries where they are intended to be sold.

It is also Digital's policy to conduct business ethically, in a way that inspires customer confidence that Digital will fulfill its commitments. At the hardware design level, Digital will often voluntarily comply with certain standards and requirements when we believe such compliance helps us build products that meet the health, safety, environmental, and telecommunication expectations of our worldwide customers.

Digital Sales and subsidiary personnel will assume that a product meets all geographic market requirements and all applicable worldwide standards, unless it is clearly stated which markets are included or excluded in the Phase 0 business plan and in the ultimate advertising literature.

It is not, however, Digital's design policy to incorporate all geographic market requirements and equipment requirements into every Digital product, regardless of cost. In cases where a product will not be designed to meet the requirements of all Digital's markets, these standards must be identified and the appropriate waivers obtained as specified in DEC STD 066-3.

On new products, business decisions are based on how to meet specific equipment or geographic requirements. The decision for a particular product may include:

- To design the new product to meet all the requirements.
- To design variations of the basic product for different sets of requirements.
- To create modification kits so that the basic product can meet different requirements by the addition of these kits.
- To withhold the product from sale in certain geographic markets. In this case, a product waiver must be obtained as specified in DEC STD 066-3.

1.1 PURPOSE

This standard defines the Digital policy and requirements for hardware product compliance with geographic, country-specific, market-specific, regulatory, and similar external requirements and standards. The individuals and organizations responsible for ensuring that the requirements be met are listed and the process for adding new requirements to this and other Digital internal standards is described.

1.2 SCOPE

All Digital hardware products, systems, purchased peripheral equipment, subassemblies, and purchased component items must comply with the requirements of this standard.

This standard is based upon current, state-of-the-art requirements that are applicable to new designs.

This standard identifies current national and international regulations and standards that Digital hardware products must comply with today. Where feasible, this standard anticipates future requirements that Digital or the marketplace will impose on Digital products.

It is Digital's policy to incorporate country-unique national and international requirements into Digital's own internal standards.

1.2.1 Digital's Internal Hardware Product Design Requirements

Digital has mandatory internal hardware product design standards that incorporate most of the international requirements our products must meet in the electronic data processing (EDP) and office equipment markets. These mandatory hardware product design standards are listed in *DEC STD 066-0 Digital Design Standards.*

1.2.2 International Requirements Not in Digital Standards

Digital's standards are intended to cover the requirements of Digital's major markets: the EDP and office equipment markets.

There are also some external standards that are used "as is" to design products. Refer to EL-EN203-00, *Digital Guide to Design Standards,* for more information on these standards.

1.3 REFERENCED STANDARDS

EL-CP060-01, *Design and Certification of Hardware Products to National and International Requirements*, lists external regulations and standards and their abstracts applicable to product design. The requirements document areas of expertise and indicate the appropriate internal Digital standard to which products must be designed and tested to comply with the external requirement.

It is noted where an external requirement exists, but not reflected in a Digital standard. Future intentions regarding the inclusion of the requirement in a Digital standard are also noted.

1.4 OTHER CONFORMANCE NEEDS

In addition to designing products to meet external technical requirements, language and labeling requirements must also be met. These requirements are included in specific Digital standards.

1.4.1 Language Compliance

Refer to *DEC STD 064-0 Compliance with International Language Requirements*, which documents Digital's policy on compliance with language requirements of countries other than the United States. The regulations cited in this standard affect shipping information, labeling, words on products, messages produced by products, and technical documentation accompanying products sent to customers located outside the United States. This standard also details the major languages spoken by our customers throughout the world.

1.4.2 Labeling

Refer to *DEC STD 178-0 Digital Identification Marking Requirements - Introduction*, which introduces Digital's general marking policy and refers to other sections and documents that provide specific marking requirements for Digital products. This standard identifies the specific part or product categories and organizations with responsibility for providing technical support in these areas.

1.4.3 Agency Submittal for Product Certification of Compliance

Many external regulations require that our products be submitted to external regulatory agencies for testing, certification, and approval. Refer to *DEC STD 062-0 Product Submittal to Regulatory Agencies*.

1.4.4 U.S. Export Regulations

Refer to *DEC STD 198-0 Technical Standards Used in U.S. Government Exports Control and Export Licensing*, which describes the technical restrictions and export controls established by the U.S. Government that apply to Digital products. It specifies the technical calculations required to obtain licenses for the various types of products manufactured and sold by Digital.

1.4.5 Resolving Noncompliance Issues

Any product design that does not comply with applicable Digital standards must receive a waiver.

The procedure for reporting issues of noncompliance prior to first customer ship is provided in *DEC STD 066-2 Waivers to Digital Design Standards*. The procedure for reporting issues of noncompliance after a product is released is provided in *DEC STD 005-2 Reporting Products Potentially Non-Compliant with Digital Design Standards*.

2 RESPONSIBILITIES

The following subheads summarize the responsibilities of those Digital organizations and individuals who ensure that Digital's hardware products meet the requirements of this standard.

3 ENGINEERING - GENERAL

Engineering shall accommodate appropriate requirements in the product design. DEC STD 066-0 lists Digital standards that reflect internationally mandated design criteria. Where a Digital standard is not listed, reference is made to a Digital function that can help the engineer understand those requirements not shown in Digital standards.

If a Digital standard does not exist, engineering shall use the regulation or external standard identified in EL-CP060-01 to formulate design criteria. The external standard must be clearly identified in the Phase 0 Product Requirements document.

Engineering will ensure that pre-production samples of the products are *provided* per the appropriate Digital standard or external standard/regulation for evaluation, testing, certification, and approvals; both internally and externally. Refer to DEC STD 062-0 for more information.

The evaluation, testing, certification, and approval process must be implemented at least six months before the anticipated first customer ship date.

3.1 DESIGN ENGINEERING

Design engineering shall work with the product manager to ensure that all promotional material accurately reflects actual equipment performance. Engineering shall ensure that the purchase specifications for components used in product designs reflect the requirements of the appropriate Digital standards.

Engineering will test the product to demonstrate that the intended requirements have been met. Testing shall occur against the criteria defined in the appropriate Digital design standards. Test results must be clearly documented and retained for future reference.

3.2 BUY-OUT PRODUCTS

Engineering shall ensure that any proposed product purchased from a supplier for resale to Digital customers meet the requirements of this standard. Where an engineer is not associated with a product, the responsible manager shall ensure that these requirements are met.

3.3 CHANGES AND ENGINEERING CHANGE ORDERS (ECOs)

Engineering shall ensure that any changes or ECOs made to a product are fully investigated for regulatory and compliance impact and that the appropriate regulatory experts are consulted.

3.4 PRODUCT MANAGERS

Should the product not meet a standard listed in DEC STD 066-0, the product manager must request a waiver according to the procedures described in DEC STD 066-2.

The product manager should use DEC STD 066-0 to determine the applicable regulations and DEC STD 062-0 to determine the external approvals required to market the product. The product plan shall include provisions for obtaining these approvals.

The product manager must ensure that the evaluation, verification testing, and certification process to the appropriate Digital standards and external regulations is implemented on any new or "value-engineered" product.

3.5 COMPONENT ENGINEERING

The Component Engineering organization shall:

- Maintain purchase specifications to reflect that the components used in Digital products are listed or approved by recognized testing laboratories (especially the primary power components).
- Control and review all ECOs to ensure appropriate external requirements are maintained.
- Ensure applicable external requirements as reflected in the appropriate Digital standards are maintained, and shall provide informational data to Engineering and other organizations as requested.
- Ensure that design engineering is provided with current data as to whether a component will or will not meet external requirements.

3.6 FIELD SERVICE

Any hardware product, purchased component, or other item developed or purchased by a Field Service organization (for example, test and diagnostic equipment) must meet the requirements of this standard.

3.7 MANUFACTURING

Any Digital cost-reduced ("value-engineered") product intended to be sold must be thoroughly re-investigated for regulatory compliance and must meet the requirements of this standard.

Any product that is altered by a manufacturing process change must be evaluated against the criteria set forth in this standard.

Testing and data retention is required for specific product types, for example, cathode ray tubes with an anode voltage exceeding 20kV.

3.8 COMPUTER SPECIAL SYSTEMS (CSS)

Computer Special Systems shall ensure that any product they develop or alter with the intent to sell meets the requirements of this standard.

3.9 PURCHASING

Purchasing shall:

- Ensure that all items specified as requiring external agency approvals (listed, recognized, or certified) are purchased from authorized manufacturers, and are properly identified.
- Ensure that certificates of compliance are obtained, where applicable.

- Ensure that all buy-outs intended for resale by Digital meet the requirements of this standard.

3.10 DIGITAL COUNTRY MANAGEMENT

Digital management responsible for any geographic region shall ensure that there is an appropriate person (or persons) in place to monitor and advise on the regulatory and standards requirements of that region.

Country advisors shall:

- Monitor and provide interpretation of local regulations, standards, and marketing requirements to which all Digital products must be certified or designed, to comply with the requirements of the geographic region; and communicate this information to the appropriate standard owner.
- Determine and provide information on what equivalent certifications or design criteria are acceptable, in lieu of the local requirement.
- Assist product/program manager to achieve formal certifications for products; assemble and consolidate certifications and approval status information for those products tested, and provide the status to the groups affected (design engineering, domain managers, and so on).

3.11 CORPORATE PRODUCT SAFETY AND REGULATIONS (CPS/R)

Internal Standards and Services (ISIS) Corporate Product Safety and Regulations (CPS/R) shall keep this standard current with worldwide requirements. The process for identifying and adding requirements is described in heading 4. For additional information, contact CPS/R, Marcia Slarskey, DTN: 223-4393, TELLME::SLARSKEY.

CPS/R shall:

- Understand what differences exist between local requirements and Digital standards.
- Work with country advisors to evaluate the regulatory and compliance needs expressed by the geographic regions. Also work with country advisors to analyze the impact (technical, financial, logistical) and to determine required action(s).
- Identify and include applicable international regulatory requirements into EL-CP060-01 consulting with the technical domains, when appropriate.
- Identify and generate additional Digital policies and standards as required by new international regulations and requirements.

4 COSTS OF MEETING REGULATIONS AND STANDARDS

After product requirements and business plans have been established, the cost to design the product to comply with all the international regulations and standards for that product is considered part of the cost to design the product. This includes the cost of internal design reviews. Engineering will pay all costs associated with design and internal design reviews associated with designing products to comply with this standard. Refer to DEC STD 062-0 for the submittals policy in this area.

5 PROCESS TO ADD NEW REQUIREMENTS TO EL-CP060-01

EL-CP060-01 includes brief abstracts of external regulations, the Digital standards in which they are referenced (if applicable), and the names of people to contact who have the technical expertise to help meet these requirements.

To add a new external standard or regulation to EL-CP060-01, refer to *DEC STD 001-0 Management of Technical Standards and Related Documentation*.

The following three-step process is used at Digital to incorporate any external hardware design requirement that should be included in Digital's hardware design considerations:

1. Identification of a new regulation or standard that products must meet. This information should be supplied in accordance with the application included in EL-CP060-01, Appendix.
2. Update of EL-CP060-01. EL-CP060-01 is part of Digital's hardware regulatory design policy which defines the worldwide regulations and external standards identified as needing to be part of Digital's hardware design practices.
3. Change or creation of a Digital standard. The addition of a new standard or regulation to EL-CP060-01 may necessitate the addition of new requirements to one or more of Digital's internal design standards. Any change to an existing Digital design standard, or the creation of any new Digital design standard, must follow the process described in DEC STD 001-0.

APPENDIX A

REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00001-00	*DEC STD 001-0 Management of Technical Standards and Related Documentation*
EL-00005-02	*DEC STD 005-2 Reporting Products Potentially Non-Compliant with Digital Design Standards*
EL-00062-00	*DEC STD 062-0 Product Submittal to Regulatory Agencies*
EL-00064-00	*DEC STD 064-0 Compliance with International Language Requirements*
EL-00066-00	*DEC STD 066-0 Digital Design Standards*
EL-00066-02	*DEC STD 066-2 Waivers to Digital Design Standards*
EL-00066-03	*DEC STD 066-3 Policy for Designing Products for All Countries Designated as Strategic Markets*
EL-00178-00	*DEC STD 178-0 Digital Identification Marking Requirements - Introduction*
EL-00198-00	*DEC STD 198-0 Technical Standards Used in U.S. Government Exports Control and Export Licensing*
EL-CP060-01	*Design and Certification of Hardware Products to National and International Regulations and Standards - Specific Requirements*

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